

## REMARKS

This paper is submitted in response to the Office action mailed on June 28, 2006. This paper amends claims 1, 8-15, 22 and 27-30. Accordingly, after entry of this Amendment and Response, claims 1-34 will be pending.

### *I. Claim Rejections Under 35 U.S.C. § 112*

Independent claims 1, 8, 15 and 22 have been rejected under 35 U.S.C. § 112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicants have amended claims 1, 8, 15 and 22 to remove the terms “being capable of” and “capable of” as suggested, which is believed to resolve the rejection. While the minor amendment does clarify the scope of the claims pursuant to 35 U.S.C. § 112, it is not believed that the amendment narrows or otherwise alters the inventive scope of the claims. Applicants believe claims 1, 8, 15 and 22 are in condition for allowance.

### *II. Claim Rejections Under 35 U.S.C. § 101*

Claims 8-14 and 27-30 are rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter.

Applicants have amended claims 8-14 and 27-30 to direct the claims to statutory subject matter. While the minor amendments do clarify the scope of the claims pursuant to 35 U.S.C. § 101, it is not believed that the amendments narrow or otherwise alter the inventive scope of the claims. Applicants believe claims 8-14 and 27-30 are in condition for allowance.

### *III. Claim Rejections Under 35 U.S.C. § 102*

Claims 1-3, 8-10, 15-17 and 22 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Application No 2004/0236915 to Kawamura et al. (hereafter “Kawamura”). In order for a reference to anticipate a claim under 35 U.S.C. § 102(e), the reference must teach each and every element of the claim. For the several reasons recited below, it is respectfully submitted that that Kawamura does not anticipate any of the listed claims.

#### **A. Independent claims 1, 8, 15 and 22 are not anticipated by Kawamura**

Claims 1, 8, 15 and 22 are independent claims from which all other pending claims depend. In regard to claim 1, page 4 of the Office action states that the limitation of “the second I/O process is capable of executing while the first I/O process is executing” is disclosed by Kawamura at paragraphs 0032-0033. Applicants respectfully disagree that this

limitation of claim 1 is disclosed by Kawamura. Claims 8, 15 and 22 include nearly the same limitations and are rejected on the same grounds as claim 1.

Page 4 of the Office action states that Kawamura's data write request Wa is the equivalent of a first I/O process and data write request Wb is the equivalent of a second I/O process. Assuming for the sake of the argument that such a conclusion can be drawn, nothing in Kawamura states that data write requests Wa and Wb are executed at the same time. In contrast, Kawamura merely states that the data to be written is transmitted to the secondary storage device at the same time as the data write request Wb. *Kawamura*, paragraph 0033. Applicants submit that the transmission of data to the secondary storage device is not the same as a first I/O process. The I/O process, as claimed, clearly includes accessing data, not merely the transmission of data that will be accessed at a later time. Therefore, there is no first I/O process being executed at the same time as a second I/O process. Accordingly, Kawamura merely discloses that a transmission of data to the secondary storage device occurs at the same time as data write request Wb.

It is further stated in Kawamura, paragraph 0033 that it is, "also satisfactory that only data write request Wb is transmitted to the secondary storage device in advance and the data to be written is transmitted... after the transmission of the request." Hence, even if the transmission of the data to be written to the secondary storage device were considered to be a first I/O process, the language of Kawamura states that this step must occur after data write request Wb. Hence, there is no simultaneous execution of the first and second I/O processes.

As such, Kawamura does disclose each and every limitation of claim 1. Therefore, claim 1 is patentable under 35 U.S.C. § 102(e) over Kawamura.

As set forth above, Independent claims 8, 15 and 22 are also rejected under 35 U.S.C. § 102(e) as being anticipated by Kawamura. Claims 8, 15 and 22 substantially include the same limitations of claim 1, namely, "executing a second I/O process in the data storage system which begins after the selected time, the second I/O process executing while the first I/O process is executing, wherein the second I/O process is accessing the same data, in the data processing system, as the first I/O process." For at least the reasons cited above with respect to claim 1, Kawamura does not disclose all the limitations of claims 8, 15 and 22. For at least this reason, claims 8, 15 and 22 are patentable under 35 U.S.C. § 102 over Kamamura.

***B. Dependent claims 2-3, 9-10 and 16-17 are not anticipated by Kawamura***

Dependent claims 2-3, 9-10 and 16-17 depend upon and contain all the limitations of independent claims 1, 8, 15 and 22, respectively. Therefore, for at least the reasons mentioned above, Kawamura does not disclose each and every limitation of claims 2-3, 9-10

and 16-17. As such, claims 2-3, 9-10 and 16-17 are patentable under 35 U.S.C. § 102 over Kawamura.

*IV. Claim Rejections Under 35 U.S.C. § 103*

Claims 4-6, 11-13 and 18-20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kawamura and U.S. Patent No 6,453,396 to Boone et al. (hereafter “Boone”). Claims 7, 14, 21, 23, 27 and 31 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kawamura and U.S. Patent No 6,557,089 to Reed et al. (hereafter “Reed”). Claims 24-25, 28-29 and 32-33 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kawamura, Reed, Boone and U.S. Patent Application No 2003/0051111 to Nakano et al. (hereafter “Nakano”). Claims 1-3, 8-10, 15-17 and 22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kawamura and U.S. Patent No 6,370,626 to Gagne et al. (hereafter “Gagne”). Claims 7, 14, 21, 23, 27 and 31 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kawamura and Gagne as applied to claims 1, 8, 15, 3, 10 and 17 above, in further view of Reed. Claims 24-25, 278-29 and 32-33 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kawamura, Gagne and Reed as applied to claims 23, 27 and 31 above, in further view of Boone and Nakano. Claims 26, 30 and 34 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Kawamura, Gagne, Reed, Boone and Nakano as applied to claims 25, 29 and 33 above, in further view of McDowell.

A prima facie case of obviousness requires that a reference or combination of references “teach or suggest all of the claim limitations.” See MPEP § 2143. For the several reasons recited below, it is respectfully submitted that the combination of Kawamura, with Hwang, Beadles, Gagne, Boone, Reed, Nakano and McDowell do not support a prima facie case of obviousness.

***A. Independent claims 1, 8, 15 and 22 are patentable over Kawamura in view of Gagne.***

Applicants respectfully submit that claim 1 is patentable over Kawamura in view of Gagne. As stated above in regards to the 35 U.S.C. § 102 rejections, Kawamura does not disclose, “the second I/O process executing while the first I/O process is executing” of amended claim 1. Page 4 of the Office action states that Kawamura’s data write request Wa is the equivalent of a first I/O process and data write request Wb is the equivalent of a second I/O process. Nothing in Kawamura states that data write requests Wa and Wb are executed at the same time. In contrast, Kawamura merely states that the data to be written is transmitted, while being attached to the data write request Wb, to the secondary storage device at the same time as the data write request Wb. See Kawamura, paragraph 0033. Therefore, Kawamura does not disclose this limitation of claim 1.

Applicants also submit that, "the second I/O process is capable of executing while the first I/O process is executing" is not disclosed by Gagne. In fact, Gagne is completely silent on "the second I/O process is capable of executing while the first I/O process is executing." As such, the combination of Kawamura and Gagne fails to disclose each and every element of claim 1. Therefore, claim 1 is patentable under 35 U.S.C. § 103 over Kawamura in view of Gagne.

As set forth above, Independent claims 8, 15 and 22 are also rejected under 35 U.S.C. § 103 as being obvious by the combination of Kawamura and Gagne. Claims 8, 15 and 22 substantially include the same limitations of claim 1, namely, "the second I/O process executing while the first I/O process is executing." For at least the reasons cited above with respect to claim 1, the combination of Kawamura and Gagne do not disclose all the limitations of claims 8, 15 and 22. For at least this reason, claims 8, 15 and 22 are patentable under 35 U.S.C. § 103 over Kamamura in view of Gagne.

***B. Dependent claims are non-obvious.***

Dependent claims 2-7, 9-14, 15-21 and 23-34 depend upon and contain all the limitation of independent claims 1, 8, 15 and 22, respectively. Therefore, for at least the reasons cited above the combination of Kawamura with Gagne, Boone, Reed, Nakano, and McDowell fails to disclose each and every limitation of claims 2-7, 9-14, 15-21 and 23-34. As such, claims 2-7, 9-14, 15-21 and 23-34 are patentable under 35 U.S.C. § 103 over the recited combinations of references.

**V. Double Patenting**

Applicants have included a terminal disclaimer concurrently with this response in order to overcome the double patenting rejection with respect to claims 1, 3, 8, 10, 15 and 17.

**VI. Conclusion**

This Amendment is submitted contemporaneously with a petition for a two-month extension of time in accordance with 37 CFR § 1.136(a). Accordingly, please charge Deposit Account No. 04-1415 in the amount of \$580.00 (\$450.00 for two-month extension of time fee and \$130.00 for Terminal Disclaimer fee). The Applicant believes no further fees or petitions are required. However, if any such petitions or fees are necessary, please consider this a request therefor and authorization to charge Deposit Account No. 04-1415 accordingly.

The Applicant thanks the Examiner for his thorough review of the application. The Applicant respectfully submits the present application, as amended, is in condition for

allowance and respectfully requests the issuance of a Notice of Allowability as soon as practicable.

If the Examiner should require any additional information or amendment, please contact the undersigned attorney.

Dated: 28 Nov 2006

Respectfully submitted,



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